

REMARKS

I. Summary of the Examiner's Action

A. Claim Rejections

As set forth on page 2 of the March 5 Office Action, claims 21 and 22 stand rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As set forth on page 3 of the March 5 Office Action, claims 17 – 22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 3,887,928 to Ohno et al. (hereinafter “Ohno” or “the Ohno patent”).

II. Applicant's Response

A. Rejection of Claims 21 – 22 under 35 U.S.C. § 112, second paragraph

Applicants have amended claims 21 – 22 to overcome the rejections based on 35 U.S.C. § 112, second paragraph. Applicants respectfully request that the rejection of claims 21 – 22 on this basis be withdrawn.

B. Rejection of Claims 17 - 19 under 35 U.S.C. § 102(b)

Applicants reproduce claim 17 (as amended) as a convenience to the Examiner:

17. An electrostatic spraying device comprising:
a high voltage generator having a high voltage output;

at least one dispensing nozzle configured to release electrostatically sprayable material during spraying operations;
a housing enclosing at least one reservoir configured to store materials to be sprayed;
a tube connecting the at least one dispensing nozzle and the at least one reservoir, the tube configured to convey the materials to be sprayed from the at least one reservoir to the at least one dispensing nozzle;
means coupling the high voltage output of the high voltage generator to the materials so that the voltage is conducted through the materials to the materials present at the at least one dispensing nozzle;
at least one ring surrounding the at least one dispensing nozzle, the at least one ring coupled to the high voltage generator, the at least one ring configured to develop a high voltage of the same polarity as that applied to the materials being sprayed and to generate an electric field in the vicinity of the at least one dispensing nozzle;
wherein during spraying operations the electrostatic spraying device is configured to impart an electrostatic charge to the materials issuing from the at least one nozzle and to focus the material being sprayed when a forward extremity of the ring is brought in proximity to an earthed target to be sprayed.

Applicants respectfully submit that it is not seen where the subject matter of claim 17 is either described or suggested by the art of record. In particular, the art of record neither describes nor suggests an “electrostatic spraying device configured ... to focus the material being sprayed when the forward extremity of the ring is brought in proximity to an earthed target to be sprayed.”

In particular, the apparatus of Ohno is apparently used to intermittently interrupt the flow of liquid material being dispensed by its nozzle, as is apparent from these portions of the Ohno patent reproduced here (emphasis added):

“In accordance with one aspect of this invention, the recording unit comprises a hollow, very small nozzle supplied with a liquid imaging material, and an electrode plate having a through hole coaxial with the nozzle and disposed opposite to the tip of the nozzle and a ring of small diameter disposed on the nozzle coaxially therewith in the vicinity of the tip or between the nozzle and the electrode plate. A convergent jet of the liquid imaging material generated by a voltage applied between the nozzle and the plate, is directed through the hole of the electrode plate to a recording member placed adjacent to the electrode plate on the opposite side from the nozzle and the convergent jet is made intermittent by applying a voltage to the ring, thereby intermittently recording an image.”
[Column 2, lines 3 – 17]

* * *

“The liquid jet of the imaging material is generated by applying a voltage 2.1 KV between the nozzle 3 and electrode plate 5 from the high-tension voltage source 7. Then, when a voltage 500 V of the same polarity as the nozzle 3 is applied to the ring 9 through the terminal 10, the non-uniform electric field formed at the tip of the nozzle 3 is made uniform and weakened, so that the jet start voltage rises to stop the jet immediately. Then, upon removal of the applied voltage, jetting is produced again to record an intermittent image on the recording member 6. This interruption of the jetting can be effected more than several hundred times per second.”

Applicants’ apparatus does not operate in this manner. Rather, as recited in claim 1 Applicants’ invention is directed to a “electrostatic spraying device configured ... to

focus the material being sprayed when the forward extremity of the ring is brought in proximity to an earthed target to be sprayed.” This aspect of Applicants’ invention is described at, for example, [0028] of the published application. There is no description or suggestion that the apparatus of Ohno is used to focus the material being sprayed.

Accordingly, Applicants respectfully request that the rejection of claim 17 be withdrawn. Applicants also request that the rejection of claims 18 – 22 be withdrawn as well since these claims depend, either directly or indirectly, from an allowable base claim.

Applicants submit the following additional remarks regarding certain of the dependent claims.

Regarding claim 20 (as amended), Ohno neither describes nor suggests a “pumping means for supplying the material to the at least one dispensing nozzle by a user-induced operation”. Applicants accordingly request that the rejection of this claim be withdrawn for this reason.

Regarding claims 21, as described above, Applicants’ invention is configured to operate differently from that of Ohno. Accordingly, it is not seen where Ohno either describes or suggests an apparatus capable of generating an iontophoresis effect as in the case of Applicants’ invention as claimed in claim 21.

Regarding claim 22, the Examiner relied upon no portion of Ohno in rejecting this claim. In particular, it is not seen where “at least one ring of electrically insulating material” is either described or suggested by Ohno. Applicants respectfully request that the Examiner identify with particularity exactly where this subject matter of claim 22 appears in Ohno or withdraw the rejection.

Applicants respectfully request the prompt consideration of this application.

Respectfully submitted,

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Date

David M. O'Neill (35,304)

David M. O'Neill (35,304)
786 Townsend Avenue
New Haven, CT. 06512
Telephone: (203) 467-0759

CERTIFICATE OF MAILING

I, David M. O'Neill, hereby certify that the following correspondence was deposited on August 5, 2008 with the United States Patent and Trademark Office using the Express Mail Post Office to Addressee service under 37 C.F.R. 1.10 in an envelope bearing the Express Mail Label No. EH192043501US and addressed to Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

August 5, 2008

Date

David M. O'Neill

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